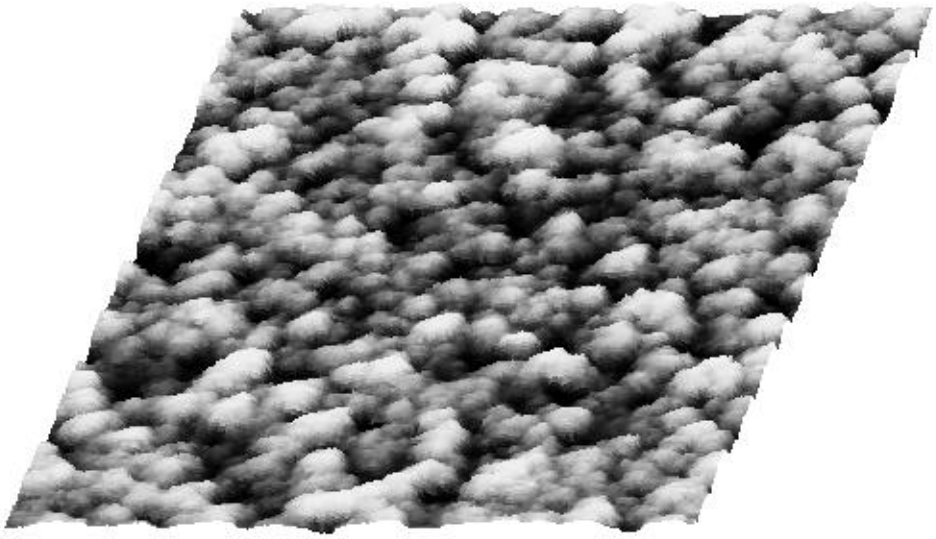
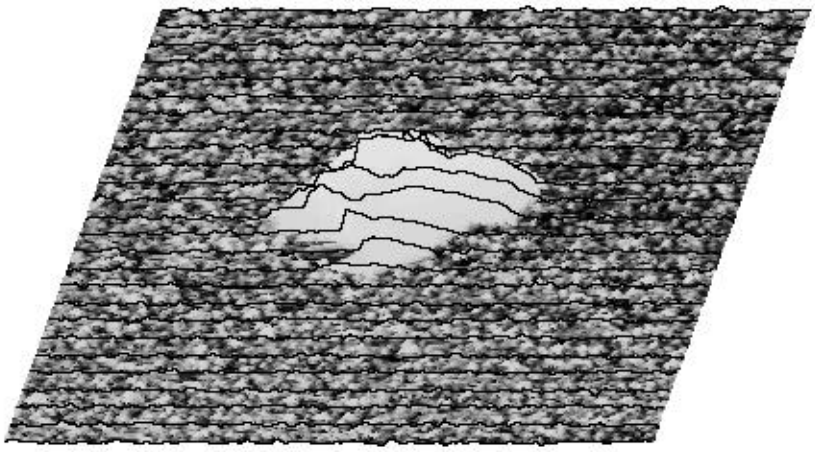
Electronic Nano-Device onto Amorphous Silicon

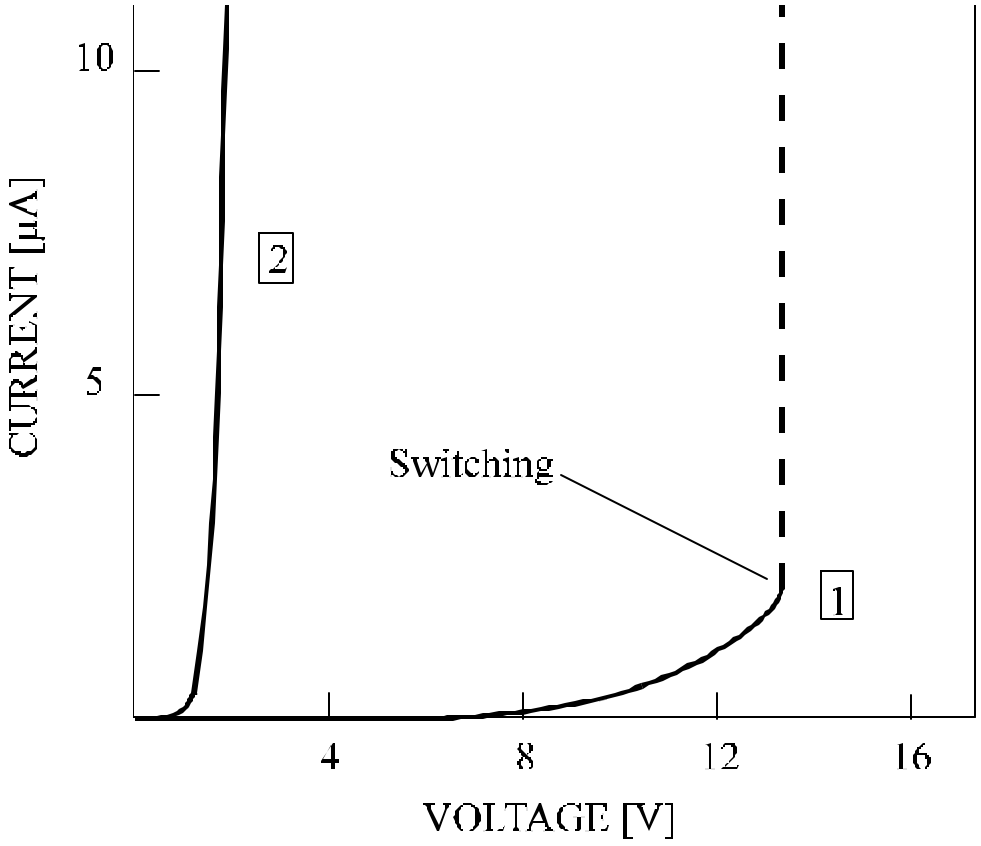
- *a*-Si:H(P)/Si *p-n* Heterojunction
- Switching Nano-Device



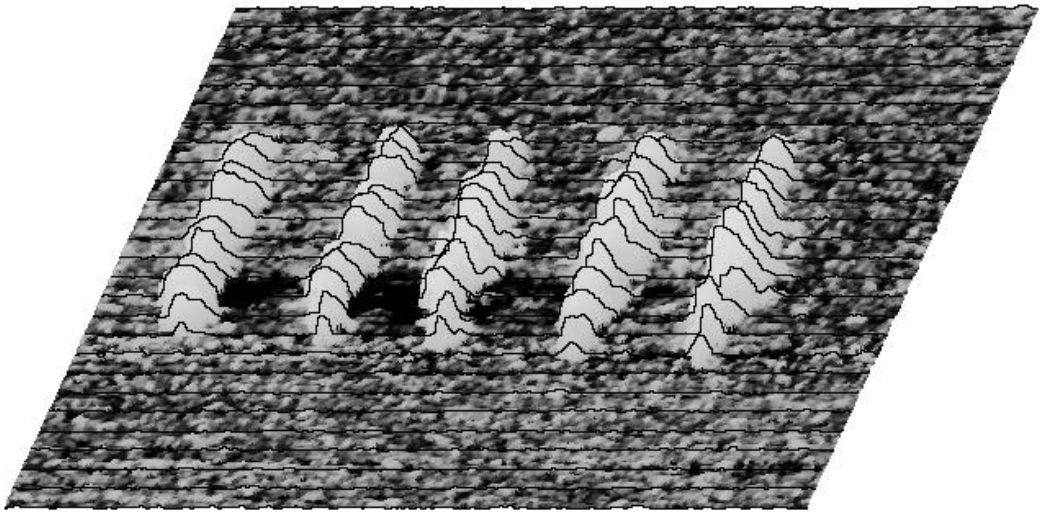
STM Image of the *a*-Si:H(P)/Si Surface before STM-Induced Modification.



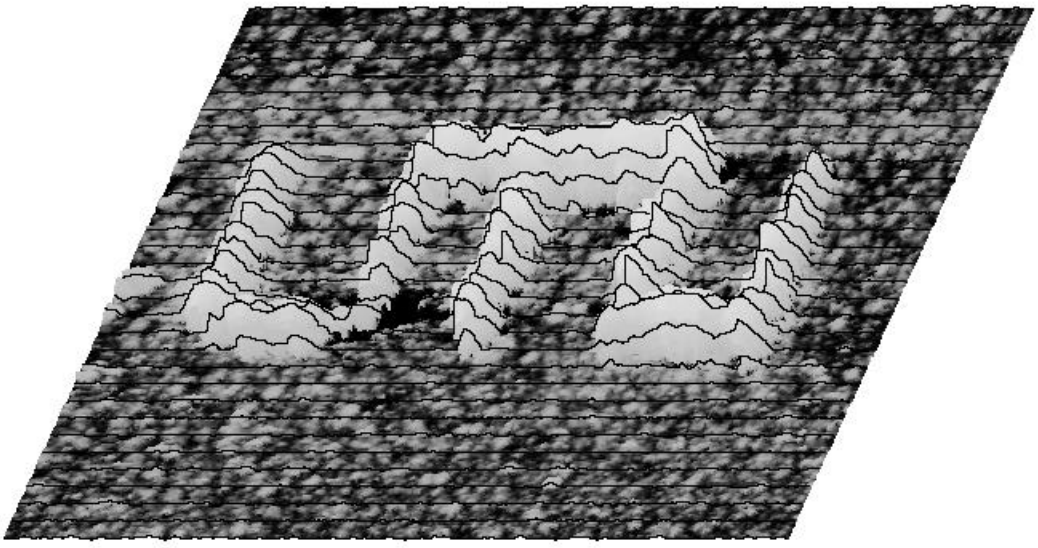
STM Image of the *a*-Si:H(P)/Si Surface after STM-Induced Modification.
A Nano-Device was Formed at this Location.



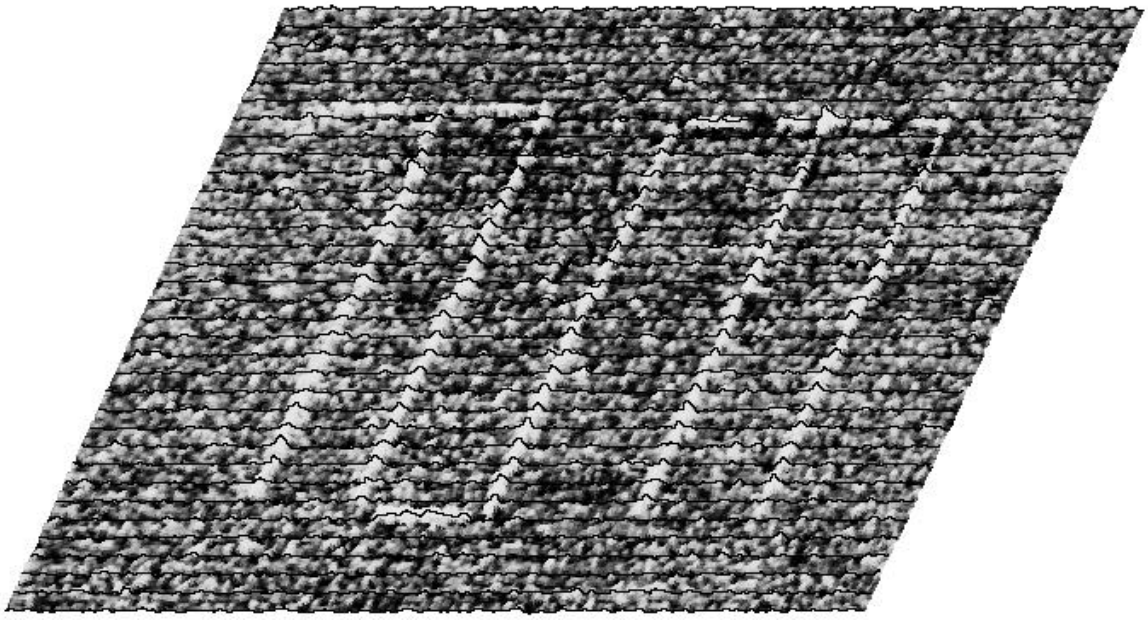
Current-Voltage Characteristic for the Nano-Device obtained by STM.



STM-"Written" Lines.



3-D STM Image of the Logo of the Ludwig Maximilians University ("LMU") "Written" into a 60-nm-thick *a*-Si:H(P) Film.
("writing" conditions: V_{tip}=-10V, I_t=300nA, writing speed: 20nm/s)



3-D STM Image of the Logo of the Technical University of Munich ("TUM") "Written" into a 30-nm-thick *a*-Si:H(P) Film.
("writing" conditions: V_{tip}=-9V, I_t=14.7nA, writing speed: 23nm/s)